REMARKS

As an introduction to the rejections over prior art, it is noted that Claim 12 recites a process for producing a composite sheet in semi-cured form, comprising the steps of sheeting a composition for composite sheet into a sheet of given thickness, said composition comprising **a magnetic fibrous filler (A)** and a binder (B), said binder (B) comprising **a photocuring component and a thermosetting component**, and not only applying a magnetic field to the composition sheet in the direction of the thickness of the composition sheet so as **to orientate the magnetic fibrous filler (A) in the direction of the thickness of the composition sheet** but also curing the **photocuring component of the sheeted composition**, thereby obtaining a **semi-cured** composite sheet (emphasis added).

The advantage of the presently-claimed invention, which involves the formation of a semi-cured composite sheet, is that since an uncured thermosetting component is contained therein, a magnetic fibrous filler is easily orientated in the direction of thickness of the semi-cured composite sheet. Therefore, the composite sheet having been cured by thermocompression of the semi-cured composite sheet is excellent in its ability to bond electrode parts and a circuit substrate. Furthermore, the thickness of the anisotropic conductive sheet can be increased while maintaining low resistance, so that not only can mathematical dispersion of electrode height be absorbed but also straining of the anisotropic conductive sheet can be inhibited. Additionally, the anisotropic conductive sheet is excellent in heat resistance, durability and mechanical strength. A contact structure wherein this anisotropic conductive sheet is employed is satisfactory for connection of electrode parts of a semiconductor element or the like to wiring parts of a circuit substrate, enables easy performance of reliable electrical connection, and exhibits high electric conductivity in the direction of the thickness of the sheet. Still further, the anisotropic conductive sheet, also

capable of conducting heat, can be obtained by employing a fibrous filler having high thermal conductivity in a direction of fiber length.

The above-emphasized claim limitations distinguish over the applied prior art in ways now discussed.

The rejection of Claim 12 under 35 U.S.C. § 102(e) as anticipated by U.S. 6,517,744 (Hara et al), is respectfully traversed.

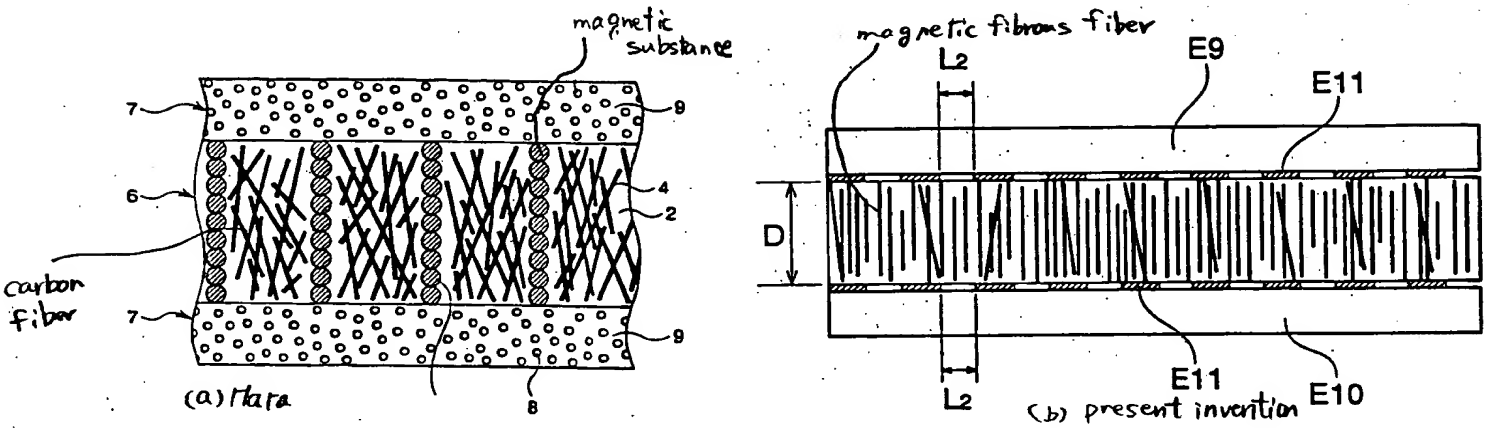
Hara et al discloses a process for producing a heat-conductive sheet, comprising the steps of:

forming a sheeted composition from a curing composition for forming a heat-conductive sheet comprising a binder, **a magnetic substance and a carbon fiber**, said binder containing a photocuring component and a thermocuring component; and

photocuring the photocuring component of the sheeted curing composition while applying a magnetic field to the sheet magnetic substance and the carbon fiber are oriented in the direction of the thickness of the sheeted composition, thereby obtaining a semi-cured heat-conductive sheet. (Emphasis added.)

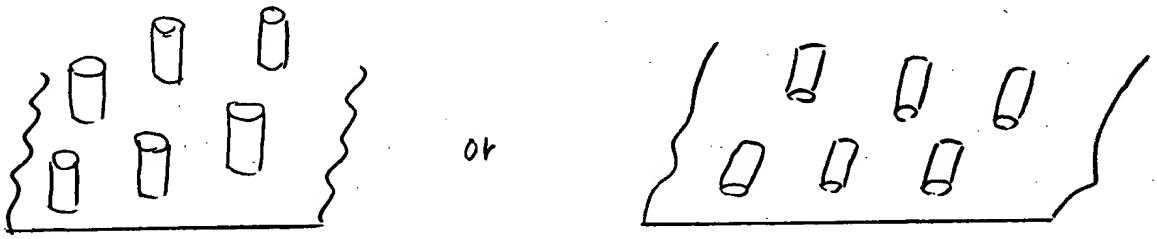
As can be seen, in Hara et al, **a magnetic substance is used together with a carbon fiber**. Hara et al neither discloses nor suggests the use of **a magnetic fibrous filler**.

A graphical comparison between the presently-claimed invention and Hara et al is shown below:



For all the above reasons, it is respectfully requested that the rejection over Hara et al be withdrawn.

The rejection of Claim 12 under 35 U.S.C. § 102(e) as anticipated by U.S. 6,180,226 (McArdle et al), is respectfully traversed. McArdle et al discloses the formation of a monolayer of substantive particles which are obtained by coating a nonmagnetic, nonconductive core with electrically conductive metal. The substantive particles may be cylindrically shaped and if so, would appear as shown as follows.



McArdle et al neither discloses nor suggests all of the above-emphasized limitations of Claim 12.

For all the above reasons, it is respectfully requested that the rejection over McArdle et al be withdrawn.

The rejection of Claim 12 under 35 U.S.C. § 103(a) as unpatentable over U.S. 6,011,307 (Jiang et al) taken with U.S. 5,519,177 (Wang et al) is respectfully traversed.

Jiang et al discloses a method comprising the steps of: sheeting a composite sheet comprising ferromagnetic particles dispersed within a matrix material, applying a magnetic field to the composite sheet in the direction of the thickness of the composite sheet so as to align the ferromagnetic particles within the matrix material and if necessary, partially curing or otherwise hardening the sheet (column 5, line 45 through column 6, line 2). Jiang et al disclose that their adhesive material is fully cured (for thermoset-type resins), baked (for thermoplastic-type resins), or otherwise hardened to completely set the adhesive material (column 3, lines 62-65), and thus, Jiang et al disclose only either thermoset-type resins or thermoplastic-type resins for their matrix material (column 9, lines 41-48).

Jiang et al neither discloses nor suggests the **combination** of a photocuring component **and** a thermosetting component, as required by the present invention. The partial curing in Jiang et al is merely the thermoset material therein not being hardened entirely which, as discussed above, is different from the presently-claimed invention. Nor are the above benefits of the presently-claimed invention disclosed or suggested by Jiang et al.

Wang et al does not remedy the above-discussed defects of Jiang et al. Wang et al discloses adhesives containing a mixture of thermoplastic resin and uncured thermosetting or photosensitive resin. However, Wang et al neither discloses nor suggests a composition containing **a magnetic fibrous filler (A)** nor a semi-cured binder comprising a thermosetting component and a component resulting from curing a photocuring component (cured

component) **together with the magnetic fibrous fiber.** Wang et al merely discloses adhesives for electroless plating for a printed circuit board. It is clearly different from the anisotropic conductive sheet of the present invention.

It bears repeating that in the present invention, **magnetic fibrous fillers are orientated in the direction of the thickness of the semi-cured composite sheet and then the orientated magnetic fillers hardly return to the former state (not orientated state).** The magnetic fibrous fillers are oriented in the direction of the thickness of the semi-cured composite sheet in advance. The many advantages flowing therefrom have been discussed above. The combination of **a photocuring component and a thermosetting component** and in which fibrous magnetic fillers are oriented but do not return to their former state, is neither disclosed nor suggested by the combination of Jiang et al and Wang et al. Nor do these references suggest the above effects.

For all the above reasons, it is respectfully requested that the rejection over Jiang et al in view of Wang et al be withdrawn.

The rejection of Claim 12 under the judicially created doctrine of obviousness-type double patenting over Claims "4 and 3" of Hara et al, is respectfully traversed. The claims of Hara et al are no more pertinent than the disclosure thereof, as discussed above regarding the prior art rejection over Hara et al. The arguments made therein thus apply herein as well. Accordingly, it is respectfully requested that this rejection be withdrawn.

The presently pending and active claim in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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